AMENDMENTS TO THE CLAIMS

1-267. (Cancelled).

268. (New) A method for producing an optical device, the method comprising:

providing a substrate having first and second generally parallel planar surfaces;

mounting at least one optical waveguide, having a core, on said substrate adjacent to said first surface;

forming a transverse notch having at least one inclined surface extending entirely through said core of said at least one optical fiber and defining at least one end of at least one optical waveguide at said at least one inclined surface;

attaching by means of adhesive at least one optical element at least partially within said notch, said at least one optical element including at least one reflective optical surface facing an end of said at least one optical fiber lying at one of said at least one inclined surface.

269. (New) A method for producing an optical device according to claim 268 and wherein:

said mounting at least one optical waveguide includes wafer scale mounting of said at least one optical waveguide;

said forming a transverse notch includes wafer scale formation of said transverse notch;

said placing at least one optical element includes wafer scale mounting of said at least one optical element; and the method also comprises

subsequent to all of the above steps, dicing said substrate to define a multiplicity of optical devices.

270. (New) A method for producing an optical device according to claim 268 and wherein:

said mounting at least one optical waveguide includes wafer scale mounting of said at least one optical waveguide;

said forming a transverse notch includes wafer scale formation of said

transverse notch;

said placing at least one optical element includes wafer scale mounting of said at least one optical element; and

the method also comprises:

wafer scale formation of a multiplicity of optical devices onto said substrate;

wafer scale formation of electrical circuitry onto said substrate;

wafer scale formation of at least one mechanical connector guide on said substrate; and

subsequent to all of the above steps, dicing said substrate to define a multiplicity of electro-optical devices.

271. (New) A method for producing an optical device according to claim 268 and wherein said core of said at least one optical fiber is in optical communication with said at least one reflective optical surface.

272. (New) A method for producing an optical device according to claim 268 and also comprising forming electrical circuitry on said second surface.

273. (New) A method for producing an optical device according to claim 268 and wherein said substrate is optically transmissive, permitting optical signal communication therethrough between said first and second surfaces.

274. (New) A method for producing an optical device according to claim 268 and wherein said at least one inclined surface is a rough surface.

275. (New) A method for producing an optical device according to claim 274 and wherein said attaching by means of adhesive at least one optical element at least partially within said notch employs an optical adhesive disposed between said rough surface and said at least one optical element, which fills in interstices of said rough surface.

276. (New) A method for producing an optical device according to claim 275 and wherein said optical adhesive has an index of refraction at least generally matched to that of said core of said at least one optical waveguide and to that of said at least one optical element.

277. (New) A method for producing an optical device according to claim 268 and wherein said at least one reflective optical surface is a flat reflective surface.

278. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element includes a concave mirror.

279. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element includes a partially flat and partially concave mirror.

280. (New) A method for producing an optical device according to claim 279 and wherein said partially concave mirror includes a mirror having multiple concave reflective surfaces.

281. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element includes a reflective grating.

282. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element includes reflective elements formed on opposite surfaces of an optical substrate.

283. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element is operative to focus light received from said at least one optical waveguide.

284. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element is operative to collimate light received from said at least one optical waveguide.

285. (New) A method for producing an optical device according to claim 268 and wherein said at least one optical element is operative to focus at least one of multiple colors of light received from said at least one optical waveguide.

286. (New) A method for producing an optical device according to claim 269 and also including, following said dicing of said substrate, defining an optical connector on a diced edge of said optical device.

287. (New) A method for producing an optical device according to claim 270 and also including following dicing of said substrate defining an optical connector on a diced edge of said optical device.

288. (New) A method for producing an optical device according to claim 268 and wherein said substrate is optically non-transmissive, not permitting optical signal communication therethrough between said first and second surfaces, the method also comprising forming at least one optical via extending through said substrate between said first and second surfaces in optical communication with said at least one reflective optical surface.

289. (New) An optical device comprising:

a substrate having first and second generally parallel planar surfaces;

at least one optical fiber, having a core, mounted on said substrate and being cut by a transverse notch having at least one inclined surface extending entirely through said core of said at least one optical fiber and defining at least one end of at least one optical waveguide at said at least one inclined surface; and

at least one optical element adhesively mounted at least partially within said notch, said at least one optical element including at least one reflective optical surface facing an end of said at least one optical fiber lying at one of said at least one inclined surface.

290. (New) An optical device according to claim 289 and also comprising electrical circuitry.

291. (New) An optical device according to claim 289 and wherein said core of said at least one optical fiber is in optical communication with said at least one reflective optical surface.

292. (New) An optical device according to claim 289 and also comprising electrical circuitry formed on said second surface.

293. (New) An optical device according to claim 289 and wherein said substrate is optically transmissive, permitting optical signal communication therethrough between said first and second surfaces.

294. (New) An optical device according to claim 289 and wherein said at least one inclined surface is a rough surface.

295. (New) An optical device according to claim 294 and also comprising an optical adhesive disposed between said rough surface and said at least one optical element, which fills in interstices of said rough surface.

296. (New) An optical device according to claim 295 and wherein said optical adhesive has an index of refraction at least generally matched to that of said core of said at least one optical waveguide and to that of said at least one optical element.

297. (New) An optical device according to claim 289 and wherein said at least one reflective optical surface is a flat reflective surface.

298. (New) An optical device according to claim 289 and wherein said at least one optical element includes a concave mirror.

299. (New) An optical device according to claim 289 and wherein said at least one optical element includes a partially flat and partially concave mirror.

300. (New) An optical device according to claim 299 and wherein said partially concave mirror includes a mirror having multiple concave reflective surfaces.

301. (New) An optical device according to claim 289 and wherein said at least one optical element includes a reflective grating.

302. (New) An optical device according to claim 289 and wherein said at least one optical element includes reflective elements formed on opposite surfaces of an optical substrate.

303. (New) An optical device according to claim 289 and wherein said at least one optical element is operative to focus light received from said at least one optical waveguide.

304. (New) An optical device according to claim 289 and wherein said at least one optical element is operative to collimate light received from said at least one optical waveguide.

305. (New) An optical device according to claim 289 and wherein said at least one optical element is operative to focus at least one of multiple colors of light received from said at least one optical waveguide.

306. (New) An optical device according to claim 289 and also including an optical connector on an edge of said optical device.

307. (New) An optical device according to claim 306 and wherein said optical connector is aligned with at least one end of said at least one optical waveguide along said edge of said optical device and also including electrical circuitry and an array of electrical connections coupled to said electrical circuitry.

308. (New) An optical device according to claim 306 and wherein said optical connector also comprises alignment bores arranged on said edge of said optical device.

309. (New) An optical device according to claim 289 and wherein said substrate is optically non-transmissive, not permitting optical signal communication therethrough between said first and second surfaces and also comprising at least one optical via extending through said substrate between said first and second surfaces in optical communication with said at least one reflective optical surface.

310. (New) An optical device according to claim 289 and also comprising at least one laser mounted on said substrate and at least one optical detector arranged to sense light emitted by said at least one laser.

311. (New) An optical device according to claim 309 and also comprising at least one laser mounted on said substrate and at least one optical detector arranged to sense light emitted by said at least one laser.